

A Melanic Male Aberration¹ of *Papilio glaucus canadensis* from Northern Wisconsin

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Melanic male specimens of *Papilio glaucus canadensis* Rothschild and Jordan have been described from northern Wisconsin (Forest County) by Ebner (1960) and from the vicinity of Nipigon, Ontario, Canada by Sicher (1962). Similar male specimens of *Papilio glaucus* have been reported from Markham, Ontario, Canada (Johnstone, 1978), Penland, North Carolina (Rosier, 1977), and the Great Smokey Mountains National Park, Tennessee (see Brewer, 1980). Similarly-colored specimens which could be females have been reported from West Virginia (Drees, 1978) and by Walsten (1977), although it has been suggested (Clarke, 1978) that these specimens may in fact be male mutants rather than semi-melanic females

¹This specimen is presently located in 240 Russell Laboratories, University of Wisconsin and will be deposited for permanent reference in the Milwaukee Public Museum (Invertebrate Zoology section).



Fig. 1a. Melanic male aberration of *Papilio glaucus canadensis*.
Upperside



Fig. 1b. Same as Fig. 1a. Underside

or gynandromorphs (with partial male and female characteristics).

These kinds of aberrations are probably not related to the dimorphism (black and yellow forms) in females of *P. glaucus glaucus* L. (Clarke and Sheppard, 1959; Shapiro, 1981) although a clear yellow patch (of various size and shapes) near the post-median discal area of the forewings, which is characteristic of essentially all of the previously mentioned melanics has also recently been observed in aberrations of melanic females of *P. glaucus glaucus* (Scriber, Ritland, Evans, in prep.; see also Edwards, 1884).

On 2 June 1980 a melanic male *P. g. canadensis* specimen was captured from amongst 100-200 swarming butterflies (of a disturbed puddling group) near the University of Wisconsin Pigeon Lake Biological Field Station (Sawyer County, Wisconsin). Our specimen (see Fig. 1) is very similar to that captured two counties eastward by L. Allen in 1958 (figured in Ebner, 1960). The upper and lower surfaces of the hind wings are rather spectacular in the amount of blue and orange coloration, and might at first be mistaken for an unusual female. As is the case with other melanic male aberrations reported above, there is a clear yellow patch near the discal area of the forewings. We assume the subspecies to be *canadensis*, because Pigeon Lake is well north of the limit of *P. g. glaucus* in Wisconsin (see Scriber *et al.*, 1982).

Our capture of this melanic aberration and the capture during the same year of a very similar melanic male *P. g. canadensis* by Joel Trick near Green Bay in (Oconto County) Wisconsin (Walt Gould, pers. comm.) suggests that this bilaterally symmetrical color pattern may not be as uncommon as once generally believed. However, it is unknown if these choice Wisconsin specimens are representatives of additional individuals in the population with the same genetically-fixed traits, or if they represent products of spontaneous mutations or environmental effects.

A literature search through the latter half of the 19th century yielded three records of male aberrations virtually identical to the one we figure. The first such specimen was captured in July, 1888 by Robert MacKenzie at Collins Inlet eighteen miles east of Killarney, Ontario, and is figured by Fletcher (1889). Another similar male was collected from Orillia (near Simcoe), Ontario by C. E. Grant (1896). A third such specimen captured by A. Ronke in Elizabeth, New Jersey in 1899 was described by S. T. Kemp (1900) who also suggested that such specimens have a distinct name (*Papilio turnus* ab. *fletcheri*) in honor of the first individual to describe the type. Except for Mecky Furr's Tennessee male (see Brewer, 1980), all of the specimens described from more northern areas (i.e. within the potential range of *P. g. canadensis*) are strikingly similar and apparently very stable through space and time, suggesting maintenance as a low-level polymorphism.

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